TRANSACTIONS

OF THE

NEW YORK SURGICAL SOCIETY.

Stated Meeting, October 28, 1903.

The President, LUCIUS W. HOTCHKISS, M.D., in the Chair.

APPENDICOSTOMY, FOR CHRONIC ULCERATIVE COLITIS, ONE YEAR AFTER OPERATION.

DR. WILLY MEYER thought the members of the Society might be interested in seeing again the patient whom he had shown at the May meeting. The patient was a woman, fifty-four years old, who had had thin bloody stools for over two years before she entered the hospital. According to her history, a diagnosis of dysenteric ulcers was made, although the clinical symptoms also pointed to a specific cause. Upon entering the hospital she was very much reduced in strength, and the electric illumination of the rectum revealed the presence of ulcers throughout this organ; bleeding surfaces were also seen high up at the turn of the rectum. Prior to her admission to the hospital she had been treated at home with irrigations, but without improvement. It was decided to resort to Dr. Weir's method of using the appendix for the introduction of an irrigating tube. Through the appendicostomic opening irrigations were kept up every day, then every other day, now for twelve months; the solutions used were silver nitrate in increasing dose, sometimes thymol, etc.. When the patient left the hospital, five months after the operation, she had gained over twenty pounds. At the time of her entering the hospital she only weighed eighty-two pounds. On account of strictures within the lumen of the appendix the reintroduction of the tube at intervals had to be given up. She was advised not to make any further attempts to increase her comfort, but to leave the

tube permanently in place. The irrigations were given with an ordinary fountain syringe and administered every other day. There has been no leakage, and she has continued to gain flesh and strength, now weighing about 110 pounds. The rectoscope showed that the ulcers had healed. The time has come to remove the tube and let the appendicostomy wound close.

APPENDICOSTOMY FOR MULTIPLE PAPILLOMA OF THE COLON.

DR. WILLY MEYER presented a man, twenty-nine years old, who entered the hospital in May, 1902. He had had repeated hæmorrhages from the intestines, and the rectal tube revealed a number of tumors within the rectum, multiple papilloma. A colostomy had been performed on July 10 and 13 according to Schede's method, and on August 20 the rectum was resected with the help of the osteoplastic method of Rehn-Rydygier. September showed the wound slowly closing, but a posterior fistula had become established at the place where the sutures had been. When the speaker took service a number of ulcerations and recurring papillomata were found in the neighborhood of the internal opening of the fistula. The patient asked that the posterior fistula be closed. Four months after the first operation, on December 1, the flap was turned back and the partially necrotic piece of the sacrum with the coccyx removed. The fistula was found at the site of the suture. In order to reach the same, it became necessary to make an additional resection of the sacrum, removing about one-half of an inch of it transversely. Then the fistula could be closed with a double row of chromicized catgut sutures after freshening the edges. So far as the fistula was concerned the patient did better. The discharge was a great deal less, but there was developed retention of urine, which the speaker thought might have been due to some injury to the nerves of the bladder. The patient's general condition gradually improved, although he had to be catheterized. Eight months later he was able to pass his water all right, and to-day he has complete control.

The speaker thought this case illustrated well the wisdom of waiting in such cases before establishing an artificial suprapubic outlet for the urine. There had been some trouble with the arti-

ficial anus, and in 1903 one had attempted to close the fistula at its original site after doing an inguinal colostomy lower down. To-day both the colostomy wound and the fistula still lead into the colon. Repeated attempts at closing the latter had failed. When he came on duty again in the hospital during May, the patient was much reduced and had frequent diarrhœa and hæmorrhages. He proposed an appendicostomy, and on the 3d of June it was performed. The appendix was pulled so far out that the entrance to the cæcum corresponded to the peritoneal wound. The abdominal wound having been closed, the appendix projected about one and a half inches over the skin. It was amputated, and probably a little more retained than was necessary. It was permeable. The next day a catheter was introduced and irrigations commenced, using nitrate of silver and thymol; the patient began to improve at once. The irrigations generally took about fifteen or twenty minutes, and the solution was passed during that time; sometimes, however, a few hours later water was still discharged through the artificial anus. To-day the patient had gained much in weight. The catheter was left out from the start.

In an article published some time ago the speaker ventured to propose appendicostomy in cases of intestinal obstruction due to cancer of the colon or rectum. If the appendix was not found to be obliterated, it certainly was simpler and safer to do appendicostomy than cæcostomy He had tried to find out in this patient whether water would return through the tube after the colon had been distended. For this purpose the afferent part of the artificial anus was tamponed, and now a large quantity of water allowed to flow in. It was noted that only a small amount of water returned. This was perhaps due to a papilloma obstructing the inner end of the tube. Only observations on cases as mentioned above will clear up this point. Dr. Meyer expressed the opinion that, according to his experience, appendicostomy had a decided place in the field of surgery.

Dr. Howard Lilienthal said he had had three cases of appendicostomy; one had been reported some time ago and was a failure; the other two were successes. In both of these latter cases there had been no difficulty in irrigating with the rectal tube introduced not far and with the catheter in the appendicostomy wound. The fluids used came through promptly. His second

successful case was operated upon by one of his adjunct surgeons. This patient gained twenty pounds in a short time in spite of the fact that there was a nephritis at the time of operation. Both these cases were ulcerative colitis. The unsuccessful case was one of papillomatous colitis; the fluids would not run as they should, and finally a cæcostomy was performed. This patient went from bad to worse and died of asthenia.

He did not believe that in old persons with stricture of the lower bowel such an operation would ever become valuable, especially when the needs of operation and relief were urgent. He believed one took chances in not working quickly, *i.e.*, doing a quick colostomy and relieving the imminent danger. More radical procedures could then be later undertaken.

CHOLECYSTECTOMY.

DR. WILLY MEYER presented a woman, fifty-two years old, who had entered the hospital the middle of last December with symptoms of a first attack of cholecystitis. All the symptoms were but slightly developed, and there seemed to be no reason to fear the existence of any serious trouble. After entering the hospital all clinical symptoms soon subsided except some slight tenderness over the region of the gall-bladder. An operation was advised and performed with a longitudinal incision through the rectum on the 27th of December, when the following conditions were found: The omentum was adherent to the gall-bladder and liver; after stripping it off an abscess was found which contained about an ounce of pus. The speaker was surprised to find underneath the omentum the existence of a pretty far advanced gangrene. Nothing could be done except to extirpate the gall-bladder, which was done in the usual manner. He used silk for tying the cystic duct; now he uses chromicized catgut. The mucous membrane of the removed gall-bladder was found to be diffusely gangrenous. The specimen which he presented showed an artificially inverted, much thickened gall-bladder, with the scattered necrotic patches of the mucosa still visible. One very large stone was found with one facet, and on top of it a smaller stone was found with two distinct facets, one on either side. It was interesting to note that the smaller stone had made a complete somersault within the bladder. This moving of the stone

probably has occurred at the time the gall was flowing into and out of the bladder, allowing the small stone to turn and to rub at one time his one pole on the larger stone, and at another time its other side. There surely had been only two stones in the bladder.

The silk ligature was used on the 27th of December; in the beginning of February, six weeks later, he succeeded in removing the thread. The patient was now perfectly well. No ventral hernia had developed.

DR. GEORGE WOOLSEY reported the case of a woman in the Presbyterian Hospital upon whom he had operated last summer. The symptoms, so far as the tenderness and pain were concerned, were confined to the left side. These symptoms were referred to a point to the left of the median line, about three inches above the level of the umbilicus. There was no pain or tenderness on pressure between the umbilicus and margin of the ribs on the right side. A probable diagnosis of cholelithiasis was made, although there arose the question of disease of the pancreas. The history dated back five or six years, and the symptoms were increasing in severity. The patient had a slight temperature, 101° F., and slight jaundice. An incision was made in the median line and nothing was found on the left side. The gall-bladder was small, and did not project below the margin of the liver. Its layers were thickened and very dark, almost gangrenous, in appearance. The gall-bladder contained many stones, half a dozen of which were quite large ones. He searched for a possible cause of the jaundice, but no stone was found in the common duct; the head of the pancreas was found to be enlarged and hard. The jaundice he attributed to slight obstruction due to pressure of the hard pancreas upon the common duct. The gall-bladder was removed by a simple cholecystectomy, with good results. The jaundice gradually disappeared. The interesting and unusual feature was the tenderness on pressure and pain confined to the left side. The explanation of this was obscure. Whether it was due to adhesions, which presented nothing unusual, to the pancreatitis, or to some other cause, he could not say.

DR. WILLY MEYER said that he too had noticed in several patients who were troubled with a chronic recurring cholecystitis that they complained of tenderness on the left side of the lower abdomen in the acute attacks and of more pain on the left than

on the right side. He believed the general practitioner was sometimes misled in his diagnosis on account of this peculiar condition. He was inclined to explain this peculiar phenomenon as being due to irradiation within the affected sympathetic nervous system.

ŒSOPHAGEAL STRICTURE DILATED BY A THREAD AND RUBBER TUBE.

DR. CHARLES N. DOWD presented a child of four years who was admitted to St. Mary's Hospital for Children, March 28, 1903, for pneumonia and œsophageal stricture. About February 15 she had swallowed some lye, and had suffered from increasing difficulty in swallowing for the last three weeks. The pneumonia, which was severe, prevented treatment of the œsophageal stricture at first; but by April 6 the pneumonia had fortunately subsided enough to permit a gastrostomy. At this time the child's condition was most pitiable. She was emaciated to the last degree, and was as nearly starved as a child could be and yet live; apparently nothing had passed from the mouth to the stomach for several days, and rectal feeding was a poor substitute for normal feeding during an exhausting illness. It was doubtful whether she could endure anæsthesia and even a mild operation, but fortunately she did, and gastrostomy was done by the purse-string method (Stamm's), and milk was introduced into the stomach while she was still on the operating table. After this she gained very rapidly; there was no leakage from the gastrostomy wound; she consumed large quantities of milk, and gained much in weight and strength.

The stricture still remained, however; no instrument could be passed from above, and repeated efforts to float a silk thread through, as advocated by Dunham, were fruitless. Therefore on May 1 an attempt was made to pass instruments upward through the cardiac orifice of the stomach; the gastrostomy opening was enlarged sufficiently to admit a Kelly's cystoscope tube, one-half inch in diameter, and by means of reflected light the orifice was found, but nothing could be passed. A large blunt-pointed copper probe was tried, then a small blunt-pointed silver probe, then filiforms and various kinds of bougies, but all of them met firm obstruction close to the stomach mucous membrane. In order to test the permeability of the stricture, a little milk was then

passed in from above through a catheter, and after a time a minute drop came through the opening, but the probe failed to pass when applied to this very spot. The child was therefore put back to bed and a second similar attempt was made three days later, but that too failed. No further attempts were made to pass instruments from below, but renewed efforts were made to pass a thread from above by running it through a drinking-tube, holding it so as to prevent too much going in at once, and then waiting for the free end to be carried through the stricture with the feeble flow of the water which worked its way through the stricture. Dr. J. H. Lewis, the house surgeon, was most patient and persistent in this work, and finally, on May 13, succeeded in getting a fine silk thread through from the mouth to the stomach. The dilatation of the stricture was then simply a matter of time and patience; other threads were drawn through on this one, and on May 15 one of them was drawn up and down so as to slightly saw the stricture walls, following Abbe's suggestion (*N. Y. Med. Record*, Feb. 25, 1893), and a piece of rubber tubing about the size of a No. 15 French catheter was stretched out by a thread attached to each end, drawn into the stricture and permitted to remain in place and dilate it by its elasticity, as advocated by Dr. Curtis before this Society (see ANNALS OF SURGERY, Vol. xxxi, p. 352). This tube slipped into the stomach, and on May 20 was removed, and an unsuccessful effort was made to pass bougies from the mouth; they only went to a point seven inches from the teeth, however. On May 22 another larger tube was stretched and drawn into the stricture, and four days later this was drawn up through the mouth; but even then bougies could not be passed from above. On May 27 she was able to take milk and soft hominy porridge by the mouth, and the next day she took crackers and bread and milk.

May 29 a No. 15 (F.) bougie was passed upward by inserting its tip in the end of a No. 12 catheter, which was drawn upward on one of the threads. By pursuing this method only a No. 16 bougie could be passed from below, June 11, and none could be passed from above. On that day a No. 19 wire bougie (Dunham) could not be drawn through the stricture. A piece of rubber tubing the size of a 32 French catheter was therefore stretched and drawn into the stricture; on the following day this had slipped into the stomach, and a No. 24 bougie could be

passed from above. The bougies were then passed daily, and by July 17 a No. 28 was passed into the stomach from above. Bougies have been passed since at irregular intervals, and now size No. 26 passes easily into the stomach, and she takes the ordinary kinds of solid food and swallows and digests them well.

There are several points of interest in this case. The most important is the passage of the silk thread through the stricture after the failure of most careful and persistent efforts to pass instruments both from above and below. The stricture occupied the lower three inches of the œsophagus, and was so tight as to hardly have a lumen. When the child took fluid by the mouth, she swallowed a little, and then regurgitated it, throwing up, as nearly as could be measured, all that she had taken; and when the process was observed by introducing milk into the œsophagus through a catheter, and then watching for several minutes at the cardiac orifice through a cystoscope tube with the aid of reflected light, so small an amount of milk trickled through that it could hardly be called a drop. Yet the thread finally found its way through this minute channel, a remarkable illustration of the efficacy of this simple procedure so ably proposed by Dr. Dunham (ANNALS OF SURGERY, March, 1903, p. 350). This method is apparently the best that we have for introducing a guide through a very narrow œsophageal stricture. The case, too, illustrates the efficacy of the stretched rubber tube as an œsophageal dilator. It was surprising how easily the tube could be introduced, and how quickly it dilated the stricture when in place. After drawing the thread up and down a few times, the first size, No. 15 French, was easily introduced, and probably fell back into the stomach on the following day. The second size, No. 20 French, was also easily introduced, and was held in place by fastening the string to the cheek; this, however, caused much irritation. The third size, No. 32 French, was also easily introduced, and was only left in place one day, but in that time it dilated the stricture from sixteen to twenty-four, as measured by bougies. No doubt the entire dilatation could have been accomplished within a very few days, or perhaps at a single operation. With this weak child, however, it seemed better to use a more gradual method.

There was enough leaking from the gastrostomy wound to make a troublesome complication in this case. After the enlarge-

ment of this wound for the introduction of the cystoscope tube and passage of instruments, purse-string and interrupted sutures were taken to constrict the opening; but as there were no fresh peritoneal surfaces, they did not prevent leaking entirely, and it hardly seemed wise to expose the peritoneal surfaces anew, since healing was taking place without it. The wound has now been practically healed for weeks, although there is still a very little leaking from a minute opening.

THROMBOSIS OF LATERAL SINUS AND UPPER JUGULAR VEIN.

DR. CHARLES N. DOWD presented a girl of eleven years who had been suffering from a discharge from the left ear for over a year. Six months ago it became worse; for the last month she had suffered from increasing pain, and on September 12, two days before her admission to St. Mary's Hospital, she had a chill. When admitted, there was moderate tenderness over the mastoid, and soon afterwards she had a chill, and her temperature went up to 105.2° F. On the following morning he operated, and found extensive disease of the mastoid. There was considerable pus in the antrum and the bony structure behind and below it. It was an extensive case of suppurative mastoid disease, and a thorough mastoid operation was done, all the pneumatic cells being removed, and drainage established from the tympanum through the antrum. There was one spot of bone over the lateral sinus that looked suspicious, and it was removed; the sinus was inspected and found to be normal in appearance. After the operation the temperature went down, and remained so for one week, all the symptoms being favorable; then it suddenly went up again; the patient had a chill, then another and another, the temperature going to 105° F., and over the upper part of the jugular vein there was some swelling and tenderness.

Another operation was therefore done. On removing the bone from over the lateral sinus much inflammatory exudate was found, and hence, before proceeding further there, an incision was made in the neck and the internal jugular vein was removed from just above the clavicle to a point above the entrance of the facial vein. The vein above this point was shrunken and its lumen obliterated. The longitudinal sinus was then exposed from

the bulb backward for about an inch and a half, and was found to be obliterated throughout this area, its shrunken walls and the adjoining dura showing a plastic exudate which indicated the extent of the inflammation. Since no clot could be turned out here; and since the infection which had caused the recent chills had apparently come from the upper jugular, further exploration seemed inadvisable, and accordingly the wound was packed and the dressing applied. There has been no return of the chills and no further evidences of either septicæmia or pyæmia, and the patient has progressed steadily towards recovery, the wound now being nearly healed.

DR. WILLY MEYER had had two cases of thrombosis of the internal jugular in which an operation had been previously done and the sinus exposed by an aural surgeon on account of conditions similar to the one reported by Dr. Dowd. In one case he had ligated the jugular vein just above the clavicle, and, in the other, the vein was so thoroughly thrombosed far down towards its entrance into the subclavian that he decided not to attempt to loosen it. In both cases the vein was not extirpated, but slit open in its entire length. In the first case irrigations could be made through the temporal bone and the fluid made to appear in the sinus; in the other case this could not be done. Both cases made good recoveries.

TUBERCULAR OSTEOMYELITIS OF THE TIBIA.

DR. CHARLES N. DOWD presented a child two years old who was in good health until the middle of April, when his mother noticed that he complained of tenderness over the middle of the left leg. At that time no swelling was apparent, and there was no history of injury. A slight swelling, however, soon appeared, and increased very slowly until his admission to St. Mary's Hospital, July 20. At that time it was about an inch and a half in diameter, was hard, and tender on pressure; it was on the anterior surface of the left tibia about its middle; the skin was freely movable over it, and there were no signs of acute inflammation. The bone, both above and below this point, seemed slightly thickened; his temperature was 100.5° F.; pulse, 120; respiration, 24. Operation was done July 24, and there was found to be an involucrum about the entire tibia, which at the point of great-

est swelling was one-half an inch thick, and over the rest of the bone was about one-eighth of an inch thick; this was removed over the entire anterior surface of the bone, which looked hard and almost normal; but on cutting through a spot which seemed a little softer than the rest, the entire bone cavity was found to show evidence of extensive rarefying osteitis; it was roughened; there were small sequestra, and the bone in many places was destroyed almost to the surface. All of the bone and involucrum between the two epiphyses was removed, excepting a small strip which was just sufficient to maintain the shape of the leg with the aid of splints and the fibula. The cavity was washed out with bichloride of mercury solution, 1 to 5000, and the periosteum and skin were sewed together with catgut, and a wet dressing applied.

The wound healed up promptly by primary union without incident. The accompanying photograph was taken fifteen days after the operation. The child has remained well ever since excepting for bronchitis, for which he is now being treated in the hospital. There is still very slight tenderness about the tibia.

The Pathological Report, which was made by Dr. Mathews, the hospital pathologist, was as follows:

Periosteum and medulla of tibial shaft.

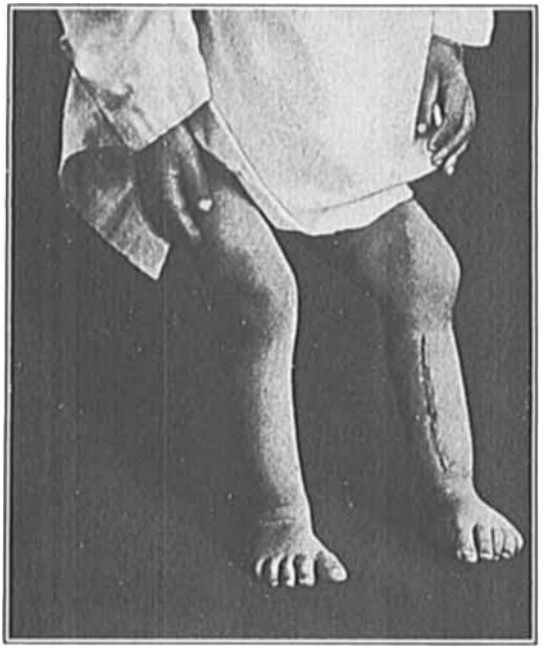
Small masses of tissue.

1. Periosteum. The tissue shows production of periosteal bone and thickening of periosteum. It also shows discrete typical tuberculous lesions, *i.e.*, miliary tubercles with central necrosis and periphery of giant and epithelioid cells.

2. Medulla shows lesions of diffuse tubercle. No microscopic evidences of suppurative inflammation.

Culture smears on blood serum (Loeffler) remained sterile in thermostat.

Tubercular osteomyelitis of the large long bones is certainly among the rarer inflammations, the tubercular processes usually being confined to the epiphyses and to the tissues adjacent. It is mentioned by various authors, but is uncommon enough to warrant the presentation of this case to the Society. The entire history of the disease and the appearance at operation were those of subacute osteomyelitis, and the general disease of the medulla, the formation of sequestra and of involucrum, corresponded to that disease. The satisfactory healing by primary union is also



Tubercular osteomyelitis of tibia fifteen days after operation.

noteworthy in so extensive a bone lesion, and it emphasizes the desirability of attempting to gain such healing in the subacute cases. The strip of bone left was not strong enough to fasten nails to, according to Neuber's method, if one had been so disposed, and the spots of local inflammation which would have been thus closed would have been disadvantageous.

CHOLECYSTECTOMY.

DR. HOWARD LILIENTHAL presented a man, twenty-six years old, who had been admitted to the hospital March 14, 1903. He had had measles and rheumatism, but no typhoid fever He had no jaundice. He had had hæmorrhoids for two years. During the past two years he had had several attacks of what apparently was biliary colic. He had never passed any stones, although stones had been looked for. The attack for which he came to the hospital had lasted seven days. He had cramps in the epigastrium. He had vomiting and, two days after, pain and chills. The next day his vomiting continued. For four days he was constipated. The pain was constant until two days before admission, when it began to diminish; it continued to be localized in the epigastrium. On admission, the patient had a temperature of 101° F. and no jaundice. The local and physical signs showed tenderness and rigidity in the right hypochondrium, the tenderness being one and a half inches above and to the right of the umbilicus. He was operated upon on the 17th of March. Three-inch rectus incision. The gall-bladder was removed after separating omental adhesions. It was about six inches in length, had thick walls, was full of pus, and contained eight stones. Ulcerations and gangrenous areas were present. The specimen was presented. The stones were fairly large. A few days afterwards he had hypostasis at bases of both lungs. He did not incise the common duct because there were no signs of general obstruction, and so he saw no reason for so doing. Chromic catgut was used to ligate the cystic duct. By April 8 the wound had healed nicely, and the patient had had no trouble since with his gall-bladder.

PYLOROPLASTY; GASTROJEJUNOSTOMY.

DR. JOHN ROGERS, JR., reported the case of a man, fifty-six years old, whom he had seen in December, 1902, with a dyspepsia

which had been of about twenty years' duration. Examination revealed a dilated stomach and palpation showed a possible tumor in the region of the pylorus. The patient had all the symptoms of a pyloric obstruction, and a tentative diagnosis of cancer was made, as the symptoms had become recently very much exaggerated. An incision was made in the right rectus muscle, and the findings were simply those of a thickened pylorus. The patient took ether very badly, and all attempt at pylorectomy was changed to hasty pyloroplasty. The pyloroplasty opening was large enough to admit of two fingers. The patient was all right until August last, when symptoms of obstruction again appeared. This showed the failure of the pyloroplasty operation, although the conditions for a success were good. On October 5 he did a gastrojejunostomy by a method which is used in many of the clinics abroad, but receives rare mention in this country. It consisted in a retrocolica posterior operation. The opening in the stomach was placed on the posterior surface near the greater curvature and in the jejunum within three inches of its origin. The jejunum was then sutured in the natural vertical position (which is its course in this part) to the posterior wall of the stomach. On October 15, ten days later, the patient returned to his shop. No disagreeable symptoms followed the procedure. This form of gastroenterostomy seemed to him to be a very useful method, and one that was not enough used in this country.

Dr. Ellsworth Eliot, Jr., asked what was the condition of the stomach at the time of the second operation. He recalled a case in which all the symptoms of cancer of the pylorus were present. This patient was a woman aged forty years, and three years and a half ago, at the time of operation, he had found the pylorus to be the seat of a growth which was hard and nodular and had all the landmarks of cancer. As the general condition of the patient was such that no prolonged operation could be withstood, a posterior gastro-enterostomy with the Murphy button was done, and the abdominal wound closed. At the end of three or four months this patient had gained forty or fifty pounds in weight. She was then advised to submit to another operation for the removal of the tumor, and her consent was obtained. Upon opening the abdominal cavity no trace of the tumor could be found. The patient since then has continued to enjoy good health, without any symptoms of pyloric stenosis or evidences of any growth.

The Murphy button has never been passed, and the X-ray showed it still to be in the stomach. He had read of cases in which, at the original operation, the pylorus was resected for carcinoma, and in which a subsequent microscopical examination failed to detect the disease. The resemblance to carcinoma was in these cases believed to be due to a peculiar pyloric muscular contraction which resulted in a consistency which simulated the hard-like character of cancer. In the present instance, however, the growth noticed at the time of the original operation must have been the cicatrix of some prior extensive ulceration, and its disappearance must have been due to the removal of the irritation by the gastro-enterostomy.

DR. F. KAMMERER said that inflammatory tumors in the region of the pylorus simulating carcinoma were not so very rare. They frequently disappeared after gastro-enterostomy. In one of two such cases which he had observed a secondary laparotomy, some six or eight weeks after the operation of gastro-enterostomy undertaken with the idea of removal of the growth, showed that the tumor had entirely disappeared. The case had been demonstrated at one of the Society meetings several years ago, and he would not enter further upon its history.

DR. HOWARD LILIENTHAL said he had had three cases in which he had done the Finney operation, and he wished to speak in favor of it. The anastomosis will not contract. If the pyloroplasty opening remains at all patent, there was a strong probability that a coexisting Murphy button gastro-enterostomy would close. When Finney read his paper before the Society, he showed a stomach in which this had taken place. The Murphy button wound had closed, so that only a fine bristle could be passed.

DR. JOHN ROGERS, JR., said that the condition of the stomach in the first operation showed such a thickening of the pylorus that it simulated a cancer at that situation. Upon further examinations it was shown to be hard, but it did not cut like a cancer, and, therefore, he did not attempt to do more than a Heinecke-Mikulicz operation, making the incision through the under part of the pylorus and adjoining portions of the greater curvature of the stomach and first portion of the duodenum. It thus approached a Finney operation. At the second operation the thickening and hardness had disappeared from the pylorus. The finger was passed through the pylorus, and it was demonstrated that the

pyloroplasty had failed from cicatricial contraction. It had shrunk from a size admitting two fingers at the original operation in the previous December to a barely perceptible aperture.

CONTUSION OF ABDOMEN; RUPTURE OF THE SMALL INTESTINE; ENTERORRHAPHY.

Dr. L. W. Hotchkiss presented a man, twenty-one years of age, who was admitted to Roosevelt Hospital, September 2, 1903, with the history that while helping some other workmen to lift a heavy fire-shovel the patient received a powerful blow in the abdomen from the handle. He experienced immediately intense abdominal pain and began to vomit. He was brought to the hospital shortly afterwards by the ambulance. At the time of admission his condition was fairly good; there was very little or no shock; but he complained of great pain in the abdomen, and lay in bed with his limbs drawn up. There was well-marked rigidity, especially over the right side of the abdomen, and tenderness, with no evidence of any lesion of abdominal wall to account for it. His pulse was 80; respiration, 28, and entirely thoracic, and his temperature, 99.6° F. He was seen by Dr. Hotchkiss shortly after his injury, and, in view of the well-marked local rigidity, the great pain and vomiting, immediate operation seemed indicated in view of a possible intestinal rupture. The patient was prepared at once for operation and brought to the operating room a little less than an hour from the time of admission. Under gas and ether anæsthesia a laparotomy was performed, the incision separating the outer fibres of the right rectus muscle for about two inches above and below the level of the umbilicus. Gas, fluid, and some intestinal contents escaped on incising the peritoneum, and, after washing with saline solution, the coils of small intestines lying near incision on the right side of the abdominal cavity were examined. A rupture through all the coats of the jejunum was quickly found, isolated, and closed with fine silk sutures after Connell's method, the lower end of the tear being closed by a Lembert suture only, and the suture line fortified by one or two others. The tear involved nearly one-half of the circumference of the intestine, and extended from the mesenteric nearly to the free border in a direction at a right angle to the long axis of the gut. After thorough flushing of the peritoneal

cavity with warm saline solution, the abdominal wound was closed without drainage, and the patient returned to bed in very fair condition. The subsequent history of the case was uneventful. Vomiting occurred only once after the operation, and some slight colicky pains the first two days. There was some elevation of temperature, but no wound infection, and the healing was prompt and satisfactory. Rectal feeding was kept up for about ten days, and after this a gradual resumption of ordinary diet. The patient was discharged well on September 24.

The principal features of interest in the case are the character of the injury, the symptoms, rigidity, and continued vomiting, the early operation, and the efficiency of the Connell suture.

The case showed the value of sudden marked rigidity of the abdominal wall as an indication of rupture of the intestine. Although this is by no means pathognomonic, it is always suggestive in cases of this sort, and, taken in connection with the nature and situation of the injury, often justifies an exploratory incision.

HARELIP AND CLEFT PALATE.

DR. A. L. FISK read a paper with the above title.

DR. GEORGE WOOLSEY, in referring to the mortality from marasmus, said that the different results that were obtained in private and in hospital practice were very striking. He knew of one hospital surgeon who had given up operating for harelip in hospital practice on account of the bad results obtained. It must be remembered that the general condition of the harelip cases admitted to the hospital was bad.

Regarding the time for operation, he thought it was the wisest plan to wait until such a time when the tissues were strong enough to bear the sutures, so that they would not readily pull out. Again, he thought we should wait until the baby was old enough to stand the hæmorrhage. Very young babies do not stand bleeding well. He preferred to wait until after the second month.

With regard to cleft palate, it is certainly easier to wait until the child is four or five years old, when the mouth is larger. Especially since the appearance of Wolf's and Brophy's papers the tendency was to operate earlier. He had done Brophy's

operation in only one case, but he was not impressed with it. In this operation the patient must be very young, because then it was easier to bring the cleft together by twisting the wires.

DR. CHARLES N. DOWD said that there was one element in the method advocated by Brophy which he had considered with much interest, viz., the bringing down of mucous membrane from above the edge of the cleft, and hence avoiding the lateral cuts which are so often made. Brophy had specially devised periosteal elevators for this purpose, and used the method in children whose first teeth had appeared when the bones could not well be crushed together. The flap of periosteum and mucous membrane which was brought down was wider than that obtained when the edges of the cleft were denuded by cutting, but the tissue which was brought down from above the cleft was very thin in the two cases in whom he had tried the method. There was, however, a decided gain in the width of the flap.

DR. WILLY MEYER said that he did not advocate operating upon such cases before the end of the third month. He emphasized the importance of having the babies properly trained in using the feeding-bottles. The rubber nipples had to be so arranged that, when pressed by the lips, the milk would squirt out into the child's mouth.

Stated Meeting, November 11, 1903.

The Vice-President, HOWARD LILIENTHAL, M.D., in the Chair.

TENORRHAPHY.

DR. BERN B. GALLAUDET presented a man who was injured a year ago by an explosion of gas. Four of the extensor tendons of his left hand, including the extensor longus pollicis and brevis, were cut. Considerable retraction had occurred, and some difficulty was experienced in bringing together the ends of the divided tendons. The radial nerve had also been cut, and after uniting the tendons this was anchored into the fascia by means of a fine

catgut suture. The wound was closed and the hand put up in a position of hyperextension. Primary union occurred throughout, with the exception of a small area over the tendon of the extensor longus pollicis, where there was slight sloughing. The resulting sinus closed in about two months.

At the time of the accident there was marked numbness over the region of the radial nerve: this had practically disappeared.

CASE OF EXCISION OF KNEE FOR FLEXURE ANKYLOSIS.

DR. F. TILDEN BROWN presented C. K.; male; aged fifteen years; a native of the United States, who came under observation in June, 1902, with a right-angled flexure of the left knee. Despite the wearing of a high-heeled shoe, he walked in a crab-like fashion, the sound leg being kept voluntarily bent in order to help compensate for its flexed and ankylosed mate.

There was no family tuberculous taint, and the patient's history and present condition gave no evidence of any tuberculous foci, except in regard to this left knee.

When eighteen months old he fell out of an overturned baby carriage. Two months later there was a swelling of the left knee, which was opened in the popliteal region. Some two months later he was received at one of the hospitals in New York, and there treated for two years by an extension apparatus, and for an abscess in and about the knee. When the boy left the hospital, at the age of four and one-half years, his knee, although ankylosed, is said to have been but little bent, and he continued to wear a brace for three years; despite which flexure was gradually increasing. When examined, the boy was found fairly well nourished. The lower end of the sternum was somewhat prominent, as in pigeon breast. Heart, lungs, liver, and spleen gave the physical signs of normal organs. The left knee presented an ankylosed flexure of eighty-five degrees. Numerous transverse and vertical scars were about the joint, and the length of the knee showed striking evidence of the abnormal epiphyseal growth. As the boy and his mother desired a surgical correction, a cuneiform excision of the knee was made on August 26, 1902, at the Presbyterian Hospital, under gas and ether anæsthesia.

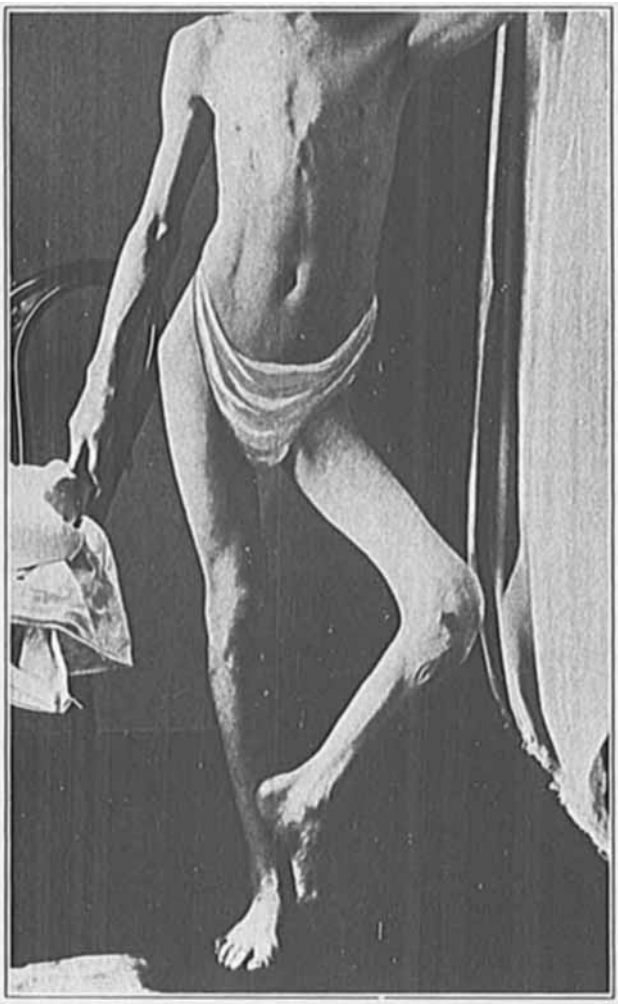
A transverse incision was made from the outer to the inner condyle; tissues and periosteum reflected; wedge-shaped piece

of the femur and tibia, three and one-fourth inches wide at its base, was removed by saw. On straightening the leg it was found necessary to remove small similar sections, with a total additional base of one and five-eighths inches, to obviate bony interference with full extension. And now, although the bony biatus was large enough not to prevent full extension, nevertheless the hamstring tendons and bound-down popliteal vessels were the cause of limitation, permitting only of about 170 degrees of extension. Bony, periosteal, and cutaneous tissues were separately sutured. During this procedure, as well as the application of plaster-of-Paris splint, forcible extension was exerted. On reaching his bed the boy was put in a Volkman sliding extension splint with weights, and so retained for a month. Primary union, and convalescence was uneventful. He was discharged seven weeks from the time of operation, still wearing a well-fitting plaster-of-Paris splint. For a week before discharge he had been permitted to use the leg a little in walking, braced, of course, by the splint; despite the precautions, there seemed to be a slight evidence of a recurring flexure. At this juncture he was fortunately able to elicit Dr. W. R. Townsend's interest in the case, and by his personal oversight in the matter of various braces, which have been worn now for over a year, the leg is even straighter to-night than when he left the hospital.

In view of the great difficulty met at the time of operation to extend the leg more than to 170 degrees even after the removal of a bony triangle, the anterior face of which was more than five inches,—and this limitation being recognized as due to tension of the flexor tendons and popliteal vessels,—it is not easy to understand how works on orthopædic surgery advocate the correction of such ankylosed deformities by forcible flexion and extension without any cutting other than a previous tenotomy. It seems certain that the popliteal artery could not have escaped rupture in this particular case had such a practice been here attempted, for the old popliteal cicatrices had bound the artery so firmly to the adjacent tissues as to give it a dangerous tension on closing the hinge after the general generous excision here done.

Dr. W. R. Townsend has kindly contributed the accompanying notes to Dr. Brown's case:

C. K. came to the Out-Patient Department of the Hospital for Ruptured and Crippled, October 15, 1902, with a flexion



Ankylosis of the knee in flexion; corrected by excision.

deformity of nearly twenty degrees following an excision of the knee. As this patient had suffered the removal of so much bone at the time of operation, it was not deemed advisable to do another excision or osteotomy, but to treat him by means of a Thomas knee-brace, with extension straps, applied to go inside of the leg-bars and fasten to the footpiece. Direct traction was thus made on the tibia and fibula and counter-traction made by the ring passing around the upper end of the thigh. The limb was thus gradually pulled down and, as the boy grew, straightened. This method is particularly applicable to cases where, after excision, there is a little deformity remaining, and the bony union between the excised fragments is not perfect.

The necessity for after-care in these cases is very great, and the number of patients who apply at the Hospital for Ruptured and Crippled suffering from relapses after excisions is quite large, the most common deformity being the flexion. In this instance the flexion was not a relapse, because the limb had to be placed in flexion, and to have removed any more bone would not have been proper, and would have sacrificed very materially the growth of the leg, and to forcibly straighten it might have caused serious damage by rupture of the popliteal vessels.

DR. ROYAL WHITMAN said that in childhood a stiff knee would almost invariably become flexed unless it was protected. He thought in such cases, in the younger class, it would be unfortunate if one were obliged to resort to a cuneiform excision which would remove the epiphyseal cartilages in whole or part. Except in extreme case, if the deformity could not be overcome by correction within the joint, he would favor simple osteotomy of the femur just above it. In many instances preliminary division of the hamstrings might be required, and it was often advisable to straighten the limb at several sittings, allowing intervals for the adjustment of its circulation to the new conditions.

CASE OF TRAUMATIC HERNIA; PRIMARY STRANGULATED INGUINAL HERNIA SYNCHRONOUS WITH EXTERNAL VIOLENCE.

DR. F. TILDEN BROWN presented J. B.; male; eighteen years; groom. On the morning of April 9, 1902, being called to an accident case at the Riding Club, I found the patient lying

on his side, his legs drawn up and his hands pressed over the lower left part of his belly. Attitude and facies were both corroborative of the pain of which he complained, most in the left inguinal but to some extent in the umbilical region. Pallor of face and perspiring forehead accompanied nausea, but he had not vomited for nearly half an hour before. While riding, the horse reared and fell backward upon him. He immediately felt a pain in the left groin and could not stand upright. On handling himself, he discovered at the place of greatest pain a small lump on the left side of his scrotum, which had never been there before.

Examination confirmed this observation, and showed a very tense and quite tender tumor of hickory-nut size just below the left external ring. Both testes were of normal size and at the lower part of the scrotum.

Placing the patient in a moderate inverted posture on cushions, with flexed thighs, after two or three minutes of forceful and even taxis, somewhat sudden reduction of the tumor was effected, attended with an immediate relief of the severe pain. Compression bandage was applied, and the patient removed to his home. He remained in bed eight or nine days, having some tenderness in the left inguinal region and a moderate ecchymosis of the left side of scrotum. The external ring and canal were not larger than normal, and in fact not seemingly as large as they were on the right side. The patient had never had any previous symptoms suggestive of an incipient rupture. He had been a jockey and riding groom since he was a small boy, and wishing to be in the best state to continue this avocation, he asked for a radical operation, for which he entered the Presbyterian Hospital thirteen days after the accident. Examination at this time failed to discover any evidence of a hernia, straining and coughing could effect no protrusion even into the canal. His abdominal walls were firm, and the sensation imparted over each internal ring to the examining finger was the same. Operation on April 22. Gas and ether anæsthesia. At the uppermost part of the opened inguinal canal a small pouch was found and opened. Adherent to its inner surface was a quill-size extension of omentum which was easily freed. A purse-string catgut suture was carried through the base of the pouch. The wound and

cord were treated after Bassini's method, with chromicized catgut. Bowels moved the third day. Uneventful convalescence. Primary union, and discharged on May 15.

Finding this very short sac with adherent omentum was proof enough that rupture existed, and while the exact date of its inception must remain undetermined, there is no question but that the direct exciting cause of its first appearance and sudden strangulated protrusion were violent compression of the parietes. It seems strange that such a combination of circumstances, causative of rupture, should be so rare. In Coley's report of a thousand operative cases, none presented a similar history of onset. In Bull and Coley's article in Dennis's "System of Surgery," in allusion to causation of hernia, it is stated that "in a few well-authenticated cases a pronounced hernia has immediately followed a sudden strain when absolutely no sign of a hernia had existed previously. In a few of these cases strangulation has occurred synchronously with the first appearance. Such cases are very rare, but should be borne in mind." The authors cite two cases seen at the New York Hospital during seven years, where the occurrence of a strangulated inguinal hernia had been sudden and without premonitory symptoms, unless the existence in one case of an undescended testis might be classed as such. In neither case was there any abdominal compression, nor could any unusual muscular exertion be cited as an etiological factor. The same article mentions that one somewhat similar case involving the femoral region had been observed at the Hospital for Ruptured and Crippled. The mechanism of the hernia in the case shown would seem to be adequately explained by the elastic compression theory, where, if any had previously existed, it was but a shallow sac that had never before reached nearly to the external ring. A sudden and unusual intra-abdominal pressure exerted by an outside force expressed a loop or lateral wall of bowel with force enough to protrude it through and beyond the external ring, where it was held by the constricting arch of the dense elastic fibres of the aponeurosis of the external oblique until overcome by taxis.

Dr. William B. Coley regarded Dr. Brown's case as one of the most remarkable cases of hernia that had ever been presented to the Society. The speaker said he had recently had occasion to look up the subject of traumatic hernia, and in reviewing

the history of over 50,000 cases observed at the Hospital for Ruptured and Crippled he had found not more than four in which there was a probability that direct traumatism was the cause of the rupture, and even in these four the proof was not absolute. One of the cases was that of a man who had been operated on by Dr. Coley for an inguinal hernia. The operation had been done two or three years ago, and a recent examination had shown no signs of a recurrence. A few days later the man was kicked directly over the scar, and immediately afterwards the hernia reappeared. In two of the other cases the hernia apparently developed after a kick, and in the fourth it appeared after the patient was thrown against a hard object. In the two cases in which the hernia followed a kick, there was no history of a previous examination, and the hernia might have existed prior to the accident. That possibility should always be borne in mind. It is not uncommon that a patient who comes for treatment of a hernia on one side is found to have one on the other side which he had never discovered, and in such a case, given an accident, its presence might easily be attributed to a traumatism. Dr. Brown's case seemed to fulfil the requirements of a hernia due to direct violence better than any he had ever seen or heard of. Two authentic cases had been reported in Germany, one by Belfinger and the other from Von Hacker's clinic.

STRANGULATED INGUINAL AND PROPERITONEAL HERNIA.

Dr. George E. Brewer presented a negro, aged thirty-eight years, who was admitted to the Roosevelt Hospital in August, 1903. He had suffered from a left oblique inguinal hernia for a number of years, which was usually well retained by a suitable truss. On several occasions during the last four years, in the absence of his truss, a protrusion of the hernia had occurred, which had become temporarily incarcerated, giving rise to pain, vomiting, and moderate prostration. These attacks, however, had generally been relieved by rest and taxis.

When admitted to the hospital there was an oblong tumor, about the size of a closed fist, occupying the inguinal region and upper part of the scrotum. This was markedly tender to pressure.

The patient had been vomiting for about twenty hours, and complained of severe pain in the lower abdomen. He was immediately prepared for operation, and under ether anæsthesia taxis was attempted for a few minutes, but without success. An incision was made over the tumor and the various layers of tissue divided until the sac was reached and opened. Within the sac, which was apparently divided into two compartments by constricting bands, there was found about four inches of dark-colored intestine and a small amount of bloody serum. When the constriction was relieved, the intestine slowly regained its normal color and was easily reduced. When about to close and remove the sac, preparatory to performing the Bassini operation for the radical cure, the finger was introduced, presumably into the peritoneal cavity, and though the intestines were distinctly felt, and the walls were apparently lined with smooth peritoneum, the cavity appeared decidedly restricted.

A wide incision was then made through the internal oblique and transversalis muscles, and a large coil of small intestine found in a third upper compartment of the hernial sac, which occupied a position between the parietal peritoneum and the muscular wall. The properitoneal sac communicated with the general peritoneal cavity by a constricted orifice, not narrow enough to cause strangulation, but which might easily interfere with the patency of the gut if it became distended. The peritoneal ring was freely divided and the intestines returned to the peritoneal cavity. The peritoneum was united and the wound closed above, layer by layer, and by the Bassini method below.

As there had been extensive transverse division of the muscles, the patient remained in bed six weeks. The healing was without infection, the stitches being removed on the tenth day. He had since been well.

EPIPHYSEAL SEPARATION AT THE UPPER EXTREMITY OF THE HUMERUS, WITH GREAT DEFORMITY.

Dr. George E. Brewer presented a girl, aged thirteen years, who was admitted to the Surgical Division of the Roosevelt Hospital in August, 1903. One hour before admission she had fallen down an air-shaft, a distance of five stories. When brought to the hospital she was in a condition of profound shock and semi-

conscious. The surface of the body was cold, the temperature subnormal, and the pulse almost imperceptible. There were numerous bruises over the body, especially over the right side of the abdomen and thorax, and in the region of the right shoulder. In the latter situation there was also considerable swelling, marked ecchymosis, and tenderness to the touch. As her general condition was grave, no attempt was made to examine the shoulder more carefully at the time. She was given an intravenous saline solution, and otherwise treated for the condition of shock.

Two or three days later she was more carefully examined, when it was found that there was abnormal mobility and deformity at the shoulder-joint, but without marked crepitus.

When her general condition had sufficiently improved to warrant her being moved, an X-ray picture was taken, which revealed an epiphyseal separation at the upper extremity of the humerus, the epiphysis apparently lying in the joint cavity, the upper extremity of the shaft being pushed outward and upward, and lying beneath the skin to the outer side and posterior to the acromion. Under ether anæsthesia an attempt was made at reduction by manipulation. Strong downward traction was made upon the arm, and when the shortening was overcome the elbow was carried vertically upward, as suggested by the late Professor E. M. Moore. These manœuvres resulted in a complete disappearance of the deformity; the arm was secured to the chest by a plaster Velpeau dressing. A subsequent X-ray picture showed the fragments in their normal position.

ACUTE INFECTIOUS ARTHRITIS OF THE HIP-JOINT TREATED BY INCISION.

Dr. Royal Whitman presented a girl, ten years of age, who was brought to the hospital in July, 1903, with the history that she had been very ill for two months. The child was suffering great pain; she was much emaciated and unable to stand. There was a large abscess over the outer aspect of the left thigh and the corresponding hip-joint was apparently diseased. After emptying the abscess the joint was opened and the head of the bone turned out of its socket. The cartilage was destroyed in places and the neck of the bone eroded. The acetabulum was partly filled with granulation tissue; this was removed. The abscess

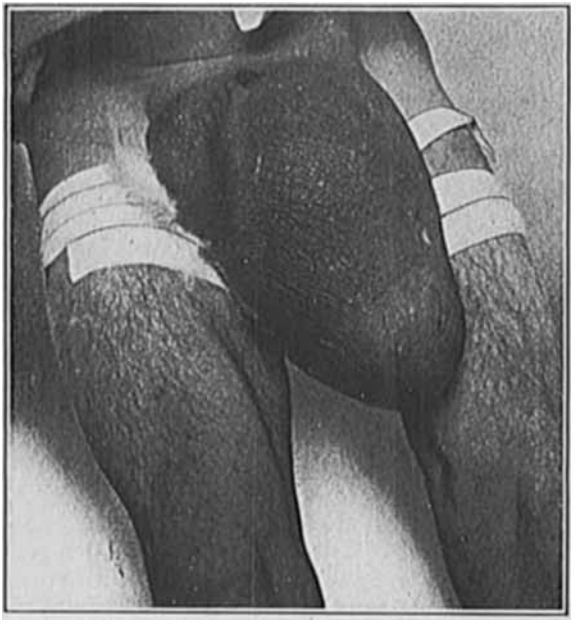


FIG. 1.—Incarcerated inguinal hernia, anterior view.

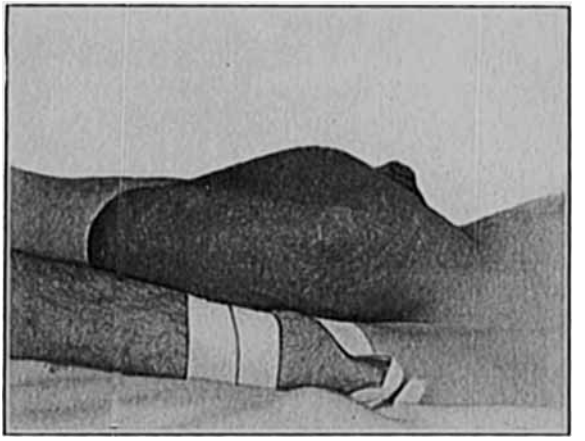


FIG. 2.—Incarcerated inguinal hernia, lateral view.

on the thigh did not communicate with the hip-joint. The head of the bone was then replaced, the wounds closed, and a plaster spica was applied. She now walks with but a slight limp. There is no displacement at the hip, no shortening of the limb, and the movements are but slightly restricted. There is no sign of disease. It is probable that the function of the joint will be eventually normal.

LARGE INCARCERATED HERNIA.

DR. CHARLES H. PECK presented a man, thirty-seven years old, who was admitted to the French Hospital in October, 1903, with the history of having had a left inguinal hernia for fourteen years. He wore a truss for a time, but during the past few years the hernia had been about the size of his fist and irreducible, and he had left off the truss. On the night previous to his admission, while working, the hernia suddenly increased enormously in size, reaching almost to his knees, and was tense, tender, and painful. (Figs. 1 and 2.) It was operated upon without delay, eighteen hours after the sudden enlargement; on opening the sac, the neck of which was constricted at both external and internal rings, a large amount of fluid escaped; the remaining contents of the sac consisted of the entire cæcum with the vermiform appendix, ileocæcal junction, and the commencement of the ascending colon, together with coils of small intestine. The wall of the cæcum was thickened, and it was much dilated with an old constriction just above the ileocæcal junction; the appendix had no mesentery, but lay beneath a layer of peritoneum along the posterior aspect of the ileum. The coils of small intestine had descended behind the cæcum, evidently having caused the sudden enlargement. There was no strangulation. After relieving the constriction and placing the patient in the Trendelenburg position, the intestine was returned to the abdominal cavity. After reduction of the cæcum, a fold of peritoneum attaching the commencement of the ascending colon to the posterior abdominal wall just within the neck of the sac could be seen and felt; it was apparently the lower end of the ascending mesocolon, attached well to the left of the median line. The deep epigastric artery was felt to the inner side of the neck of the sac, proving the hernia to be of the oblique variety. The wound was closed by the Bassini method

with chromic catgut, the result being quite satisfactory in spite of the enormous stretching of the tissues. A cigarette drain was placed at the lower angle in the great cavity in the scrotum. The wound healed by primary union without incident.

Dr. Peck stated that the man also had a reducible right-sided omental hernia, which he intended to operate on shortly. The case was interesting on account of the huge size of the hernia, its unusual contents, and the satisfactory result of the operation. He thought it rather unusual to find the cæcum and appendix in a left inguinal hernia.

(The right hernia has since been operated on by the Bassini method, a piece of omentum eleven inches long by three and one-half inches wide being excised.)

Dr. George Woolsey said that while the case of incarcerated hernia presented by Dr. Peck was remarkable as to size, the character of the contents of the hernial sac was not very unusual, quite a number of such cases being on record. The size of the hernia reminded Dr. Woolsey of a case which he operated on two or three years ago, and in that instance the sac contained a large amount of fluid and a considerable portion of the large intestine, including the sigmoid and descending colon. The cause of the large amount of fluid showed itself later in the presence of a new growth involving the intestine and omentum.

SPLINT FOR FRACTURE OF JAW.

Dr. Charles H. Peck presented a young man who was admitted to the French Hospital on October 6 with a fracture of the inferior maxilla through the lower part of the ramus. In spite of the application of the ordinary dressings, there was persistent posterior displacement. In order to overcome this difficulty, the House Surgeon, Dr. Clinton B. Knapp, suggested the use of a splint which he had devised to overcome a similar difficulty in a previous case. It consisted of a strip of tin five inches wide in front tapering to three inches posteriorly, the anterior end bent upward to form a projecting shelf, and the strip fitted to the head, to which it was fastened by a circular plaster-of-Paris bandage. Its anterior curved end projected from the forehead, strips of adhesive plaster passing from the shelf downward and backward beneath the jaw, exerting traction upward and for-

ward, which entirely overcame the posterior displacement. Posteriorly the centre of the tin splint was cut away to avoid pressure on the occipital protuberance.

DR. GALLAUDET said that very recently he saw a case of fracture of the inferior maxilla which demonstrated the futility of the ordinary four-tail bandage. In order to keep the fragments in apposition, he applied a narrow iron brace extending from the upper spine to the occiput, and thence over and beyond the forehead. This was kept in position by means of a plaster-of-Paris bandage, and by its aid a bandage was applied which prevented displacement of the fragments.

DR. LILIENTHAL thought it advisable that in the treatment of a fracture of the lower jaw the surgeon should always associate with himself a dentist, and that in addition to the external apparatus an interdental splint should be applied to hold the teeth in proper occlusion; otherwise even slight irregularities of occlusion might give rise to a great deal of trouble. The interdental splints were made of metal, extremely thin, so that the patient hardly knew he had anything in his mouth.

DR. PECK, in closing, said that in a previous case treated at the French Hospital the interdental splint had been tried and had proved a total failure. The displacement could not be corrected by any of the ordinary splints. In cases where the fracture passed between the teeth, the interdental splint might prove serviceable.

GASTROSTOMY FOR ŒSOPHAGEAL STRICTURE.

DR. F. W. MURRAY presented a man, fifty-six years old, who came under observation in May, 1903, with the history that up to eight months previous to that time he had enjoyed excellent health. He then first experienced some difficulty in swallowing, and in two months he was unable to swallow any solid food. The dysphagia gradually became more pronounced until he could no longer swallow milk. He became greatly emaciated, losing about fifty pounds in weight.

Upon admission to the hospital, an œsophageal bougie was introduced, which revealed a stricture thirteen inches from the teeth line. It was very firm and gristly to the touch, and would not permit the passage of any instrument into the stomach. Even a small shot attached to a string failed to pass the constriction.

A gastrostomy was accordingly done, and since that time, a period of about six months, the patient has been feeding himself through the gastrostomy wound. Since the operation the man's weight has increased from 144 to 190 pounds. The patient had suffered considerably from hoarseness, and a laryngoscopic examination showed a general congestion of the larynx and partial paralysis of the left vocal cord, probably from pressure.

Dr. Murray said he was inclined to regard the stricture of malignant origin, although the improvement in the man's condition since the operation rather militated against that diagnosis. There was no history of syphilis nor ulceration of the œsophagus.

Dr. Alexander B. Johnson said that the cause of the œsophageal obstruction in Dr. Murray's case was possibly an aneurism, although its location would hardly correspond with that of an aneurism of the arch of the aorta. The partial paralysis of the left vocal cord rather favored that diagnosis.

Dr. Ellsworth Eliot, Jr., recalled the case of a man of sixty years who developed an impassable stricture of the œsophagus, accompanied by a loss of flesh which was fully as great as in the case reported by Dr. Murray. A gastrostomy was done, which was followed by marked improvement. The man lived for ten or eleven years after the operation, and during that time he received all his nourishment through the gastrostomy wound. Those who had charge of the case were inclined to regard the stricture of specific origin.

Another case recalled by Dr. Eliot was that of a man of fifty-two years with an impermeable stricture of the œsophagus of doubtful origin. After gastrostomy he gained about forty pounds in weight and was able to return to his work. He died suddenly six months after the operation, and the autopsy revealed the fact that a malignant growth of the œsophagus had perforated through the pericardium.

The speaker said that, as a rule, the improvement following operation in these cases did not last long, but occasional exceptions had been recorded, especially with the scirrhous type of cancer, which was not unknown in the œsophagus.

He desired to inquire whether the patient had ever been infected with syphilis, and whether he had been subjected to mixed treatment.

DR. F. KAMMERER recalled one case of stricture at the lower end of the œsophagus, with marked impairment of the general health, where gastrostomy was followed by material improvement, and the patient lived for over two years after the operation. During this period he was fed entirely through the gastric fistula. The original diagnosis of malignant disease in that case was verified at autopsy. The patient had suffered from repeated hæmorrhages after operation, although bougies were never passed.

Dr. Kammerer said he was inclined to believe that the case shown by Dr. Murray was one of malignant disease of the œsophagus, situated somewhat below the level of the bifurcation of the trachea.

DR. MURRAY, in closing, said that an X-ray picture in his case had failed to show any shadow. This would militate against the diagnosis of aneurism, as would also the fact that the stricture was completely impassable. The speaker said he agreed with Dr. Kammerer that the case was one of cancer, probably of the scirrhous type. He thought it was located below the bifurcation of the trachea.

PARTIAL ENTEROCELE.

DR. LUCIUS W. HOTCHKISS read a paper with the above title, for which see page 258.

DR. COLEY said he had had but a single experience with a partial enterocele. The case was one upon which he operated about three years ago for a strangulated hernia of fifteen hours' standing. The patient's temperature was 101° F.; he was vomiting, and complained of considerable pain. An immediate operation revealed a properitoneal hernia with a tight constriction involving about two-thirds the lumen of a knuckle of small intestine. The constriction was reduced without resection, and the patient made an uninterrupted recovery.

DR. CHARLES N. DOWD referred to a case of partial enterocele in a child which was interesting from a diagnostic stand-point. When the patient was brought to the hospital he had fæcal vomiting, and was in a depressed condition. The history given was, that a hernia had existed, but it had apparently been reduced, and no traces of it could be found, even with one finger introduced into the rectum and the fingers of the other hand pressed

over the inguinal region. On account of the fæcal vomiting, an incision was made over the inguinal canal, and a partial enterocele was found. The constricted section of gut was not large enough to be felt through the pubic fat. The patient recovered without incident.

Dr. John B. Walker reported two cases of partial enterocele which had come under his observation. One was in a woman of fifty years with a hernia that had been strangulated for forty-eight hours. An operation was followed by recovery The other case was that of a man of sixty years with a strangulated femoral hernia that had apparently been reduced. The symptoms of strangulation, however, did not abate, and after seventy-two hours a resection was done. The case resulted fatally. The speaker said his experience did not lead him to favor resection in the treatment of these cases.

Dr. Peck reported the case of a woman of sixty years who gave no history of hernia, but who had suffered from intestinal obstruction for two days. Upon placing her on the table preparatory to operating, a protrusion could be felt over the right femoral ring. A herniotomy revealed a constriction of the intestine which included fully three-fourths of the lumen of the gut. The constriction was relieved, and, as the gut was in fairly good condition, it was returned to the intestinal cavity. The patient, who was in profound collapse at the time of the operation, failed to rally, and died in forty-eight hours.

Dr. Lilienthal mentioned a case of partial enterocele without gangrene, which he operated on and which made a perfect recovery. In cases where gangrene of the gut has occurred, the speaker emphasized the importance of extending the resection well beyond the actual limits of the diseased area on account of the well-recognized fact that the tissues of the adjacent gut are liable to have become devitalized. In cases where an intestine of doubtful integrity had been put back, it was his practice to pass a long rubber ligature through neighboring healthy mesentery, the ends being left within reach, and by means of which the implicated gut could be readily withdrawn if the necessity arose.